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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,224	06/26/2001	Guojun Zhou	P 280337 P11803	8571

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EXAMINER

AZAD, ABUL K

ART UNIT	PAPER NUMBER
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2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/891,224

Applicant(s)

ZHOU, GUOJUN

Examiner

ABUL K. AZAD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-13, 16-22 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-13, 16-22 and 25-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the communication filed on April 25, 2006.
2. Claims 1-5, 8-13, 16-22 and 25-27 are pending in this action. Claims 1-5 and 8-9 have been amended. Claims 6-7, 14-15, 23-24 have been canceled.
3. The applicant's arguments with respect to claims 1-5, 8-13, 16-22 and 25-27 have been fully considered but they are not deemed to be persuasive. For examiner's response to the applicant's arguments or comments, see the detailed discussion in the Response to the Arguments section.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, 8-10, 12, 16-19, 21 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Abella et al. (US 6,044,347).

As per claim 1, Abella teaches, "a statistical dialog system," comprising:

"a speech understanding mechanism to determine the literal meaning of input speech data" (col. 7, lines 53-63);

"a dialog semantics learning mechanism to establish semantic models based on annotated dialog training data, the annotated dialog training data associating literal

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meaning of input speech data with one or more semantic meanings of the input speech data" (col. 8, lines 22-50); and

"a statistical dialog manager to interpret and select one semantic meaning of the input speech data based on both the literal meaning of the input speech data and corresponding semantic models that are associated with the literal meaning of the input speech data" (col. 7, lines 47-67 and col. 11, lines 28-65).

As per claim 3, Abella teaches, "further comprising a responding to generate at least one response to the input speech data based on the semantic meaning of the input speech data" (col. 8, lines 1-21).

As per claim 4, Abella teaches, "wherein the responding mechanism includes a voice response mechanism to generate a voice response to the input speech data based on the semantic meaning of the input speech data; and an action response mechanism to activate an action corresponding to the semantic meaning of the input speech data" (col. 8, lines 1-33).

As per claim 8, Abella, teaches, "a system", comprising:

"a semantic model retrieval mechanism to retrieve, from a semantic model storage, semantic models associated with a literal meaning of input speech data" (col. 7, lines 47-67); and

"a dialog semantic understanding mechanism to interpret, during a dialog session, the semantic meaning of the input speech data according to the semantic models and an environmental status" (col. 13, line 50 to col. 14, line 10 and col. 15, line 65 to col. 16, line 24).

As per claim 9, Abella teaches, "an environmental status access mechanism to access the environmental status that affects the interpretation of the semantic meaning of the input speech data, the environmental status being used, together with the semantic models, by the dialog semantic understanding mechanism to interpret the semantic meaning of the input speech data" (col. 13, line 50 to col. 14, line 10 and col. 15, line 65 to col. 16, line 24); and

"a dialog data annotation mechanism to annotate the relationship between said literal meaning of the input speech data and the semantic meaning of the input speech data based on the dialog session to generate feedback dialog data" (col. 13, line 50 to col. 14, line 10 and col. 15, line 65 to col. 16, line 24).

As per claims 10, 12, 16-19, 21 and 25-27, they are interpreted and thus rejected for the same reasons set forth in the rejection of claims 1, 3, 4, 8 and 9.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abella et al. (US 6,044,347) as applied to claims 1, 10, and 19 above, and further in view of Huang et al. (US 6,865,528).

As per claims 2, 11 and 20, Abella does not explicitly teach speech recognition based on at least one acoustic model and a language understanding mechanism. However, Huang teaches speech recognition based on at least one acoustic model and a language understanding mechanism (col. 5, lines 25-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use acoustic model and language model to speech recognizer because Huang teaches his invention attempts to ascertain the accurate meaning or intent of the utterance in order to perform a particular action (col. 1, lines 50-67).

8. Claims 5, 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abella et al. (US 6,044,347) as applied to claims 4, 12 and 21 above, and further in view of Papineni et al. (US 6,246,981).

As per claim 5, Abella teaches, "wherein the voice response mechanism comprises:

"a language response generation mechanism for generating a language response to the input speech according to the semantic meaning of the input speech data" (col. 8, lines 1-21); and

Abella teaches synthesizing the voice of the language response to generate the voice response (Fig. 1, elements 20 and 22), but does not explicitly teach a text to speech engine. However, Papineni teaches a text to speech engine (Fig. 1, element 70). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a text to speech engine because Papineni invention provide a more versatile interface for interacting with the users (col. 1, lines 6-10).

As per claims 13 and 22, they are interpreted and thus rejected for the same reasons set forth in the rejection of claims 5.

Response to Arguments

9. The applicant argues, "the cited portion of Abella discusses a dialog processing system. See column 7, lines 47-67. In particular, Abella states that after user input (a sentence or utterance) comes into the system, the meaning of the utterance is then extracted and placed in a semantic tree representation. See column 7, lines 56-59. Abella offers no description to explain how the meaning of an utterance is extracted. Abella then discusses using the semantic tree to determine if the system should execute one of a number of dialogue motivating algorithms. See column 7, lines 59-63. The dialogue motivating algorithms disambiguate an utterance by using the semantic decision tree to generate follow-up questions. See column 7, lines 57-59. In other words, Abella requires the asking of follow-up questions in order to disambiguate user input (i.e. a statement, utterance, etc.). In contrast, claim 1 recites a statistical dialog manager to interpret and select one semantic meaning of the input speech data based on both the literal meaning of the input speech data and corresponding semantic models that are associated with the literal meaning of the input speech data. Abella does not teach these limitations. Thus, Applicant submits claims 1, 8, 16 and 25 are not anticipated by Abella".

The examiner disagrees with the applicant's above assertion because Abella teaches, "a statistical dialog manager to interpret and select one semantic meaning of

the input speech data based on both the literal meaning of the input speech data and corresponding semantic models that are associated with the literal meaning of the input speech data" at col. 7, lines 47-67 and col. 11, lines 28-65. Here a statistical dialog manager to interpret and select one semantic meaning of the input speech data based on both the literal meaning of the input speech data and corresponding semantic models that are associated with the literal meaning of the input speech data.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(571) 272-7599**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richemond Dorvil**, can be reached at **(571) 272-7602**.

Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450

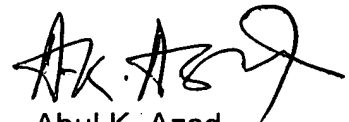
Alexandria, VA 22313-1450

Or faxed to: **(571) 273-8300**.

Hand-delivered responses should be brought to **401 Dulany Street, Alexandria, VA-22314** (Customer Service Window).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 3, 2007


Abul K. Azad
Primary Examiner
Art Unit 2626